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Negotiated Resource Reconfiguration and Co-Restoration in Public Healthcare Service Recovery: An SDL-Grounded Mid-Range Theory

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ABSTRACT

Service recovery literature is inherently biased toward the firm-transaction and focuses on recovery as a firm-managed response to a customer complaint and reimbursement (Tax et al., 1998; Smith et al., 1999). In a public health care setting, however, institutional rigidities and norms, resource constraints, and administrative inertia often prevent formal recovery from taking place (Osborne et al., 2013; Skålén et al., 2015). This empirical study develops a new mid-range theory, the Negotiated Reconfiguration Theory of Public Healthcare Service Recovery, based on service-dominant logic (SDL) and constructivist grounded theory (CGT) (Charmaz, 2014). The paper draws on 28 in-depth, theoretically sampled interviews with key informants in primary and secondary public health providers in District Mansehra, Pakistan, to develop an 8-stage Resource Realignment Process model and present eight theoretical propositions (P1–P8). The results show that public healthcare recovery is not so much an apology or a refund on the part of the firm, but rather a highly negotiated, multi-actor practice of reconfiguring resources in the process of recovery, in which informal actors (family caregivers) also function as key recovery workers to re-create and restore value co-creation (Batalden et al., 2016; McColl-Kennedy et al., 2012). The article offers an innovative concept and framework for public health approaches to state, moving from complaint-driven to the integration and resilience of an ecosystem of resources and a multi-actor approach in policy management.

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1. Introduction

In marketing, service operations, and organizational behavior, service recovery is an essential skill for restoring customer trust, rectifying service failures, and mitigating negative word of mouth. (Bitner et al., 1990; Tax et al., 1998; Smith et al., 1999; Maxham & Netemeyer, 2002). More than 30 years of research has examined service recovery from the perspective of service organizations, assuming the service organization is proactive and resourceful and has a recovery service program that addresses an aggrieved, passive consumer (McColl-Kennedy et al., 2003, 2012; Gronroos, 2011). In commercial service industries such as passenger aviation, hospitality, e-commerce, and retail financial institutions (e.g., banks), recovery toolkits are used, where the compensation is heterogeneous, standardized, and involves monetary compensation, procedural flexibility, prompt managerial apology, and service upgrade to restore perceived justice, as illustrated by the following (Tax et al., 1998; Blodgett et al., 1997; Keaveney, 1995).

However, in the public healthcare system in developing and transitional economies, such trust in the economy and recovery fails (Osborne et al., 2013; Radnor et al., 2014). Public healthcare facilities suffer from chronic budget deficits, excessive crowding, rigid bureaucracy, and a lack of competition (Nishtar, 2010; Kurji et al., 2016; World Bank report, 2019). If applicable to public health organizations, when the public hospital experiences a critical service failure such as a stock-out of vital medicines, a lost patient file, or a failure of digitalized insurance verification, the public health institution seldom follows up with a formal organizational recovery process (Skålén et al., 2015). Health workers in primary care have neither the power to arbitrate through monetary settlements nor the budget, nor, more importantly, do they have the capacity to resolve the situation structurally, while formal complaint units are complaint sinks that receive public complaints without being able to provide a structural solution (Alford, 2002; Pestoff, 2006; Brandsen & Honingh, 2016).

Formal firm-managed service encounters offer no matter recovery, but that does not mean public healthcare service encounters end in permanent failure. Rather, service actors frontline Health Care Workers, Health Care Clerks, the Patient, and, importantly, informal family carers engage in spontaneous formalization and highly negotiated reorganizations, using resources to avoid more formal and institutional bottlenecks (Batalden et al., 2016; Svehn et al., 2018). Hospital pharmacies with a shortage of life-saving drugs have family carers going outside the hospital gates to purchase drugs from private commercial vendors; administrative clerks have been seen resorting to manual paper bypassing in times when digital insurance portals have crashed, and specialist doctors are absent; nurses have been seen coordinating informal cross-departmental consults (Hastings, 2010; Skålén et al., 2015). Although very commonplace, this informal multi-actor recovery process has not been largely covered in the mainstream service recovery literature.

In addition, traditional service management theories do not explain how non-firm actors supply the operant and operam resources that help failing service encounters (Lusch & Vargo, 2014; Akaka et al., 2012). In commercial settings, co-creation in recovery is perceived as co-care or self-service (McColl-Kennedy et al., 2012). Within the community-based healthcare systems in these countries, however, there are non-firm actors – family caregivers – who engage in significant financial, emotional, and physical 'recovery labor' at the heart of the means of sustaining the care delivery systems' ability to function (Batalden et al., 2016). Without family care providers, the acquisition of services, arrangements for transport to and from the hospital, and lobbying hospital staff would end any form of contact with health services (Svehn et al., 2018; Beirão et al., 2017).

Public health facilities in developing countries face the constant challenge of running out of resources, with average government funding below 1.5% of GDP and OOPH above 60% (Nishtar, 2010; World Health Organization, 2018) in countries such as Pakistan. In such environments, encounters with

services are institutional. (Kurji et al., 2016). If help from the state is lacking, there is nowhere else to turn for institutional payback – citizens have to take an active role as co-recoverers to ensure their family members' survival (Batalden et al., 2016; Skålén et al., 2015). A theoretical perspective that goes beyond firm-centric and transactional logic (Vargo & Lusch, 2004, 2016) needs to be examined and used to study these negotiated recovery dynamics.

Furthermore, value is co-created, co-destroyed, and co-restored in a multi-actor context in networks of value chains (Plé & Chumpitaz Cáceres, 2010; Echeverri & Skålén, 2011). When the enrollment process fails, it cascades to clinicians, test ordering, and medication dispensing. Conversely, if the informal "workaround" at the nursing station works well, it can unlock downstream nursing care processes across the hospital (Beirão et al., 2017). From a formal, bureaucratic perspective, these systemic ripple effects are only visible as part of a "whole ecosystem" that accounts for interactions between formal and informal agents, humans and systems (Koskela-Huotari et al., 2016; Vargo et al., 2015).

This article aims to fill this mid-range theoretical gap by developing a mid-range theory of public healthcare service recovery from a Service-Dominant Logic (SDL) perspective (Vargo & Lusch, 2004, 2016; Brodie et al., 2011). Based on empirical qualitative data from primary and secondary public healthcare facilities in District Mansehra, Pakistan, this paper examines how service recovery negotiation and operationalization are enacted in multi-actor networks. The major research questions are: (1) What are the procedures that can be followed to reconfigure the resources to recover service in a resource-poor public healthcare sector, as conducted by heterogeneous actors, and (2) How is it done practically? (2) What structures and theoretical paths to co-destruction and co-restoration exist?

This paper makes three significant theory and policy contributions. First, it introduces the notion of Value Co-Restoration to the literature: recovery is not a "compensatory action" by the firm but a process of "co-restoration" involving several actors (Plé & Chumpitaz Cáceres, 2010; Echeverri & Skålén, 2011; Jarvi et al., 2018). Second, it offers a realistic 8-stage Resource Realignment Process model that captures the pathway of resource realignment from the original service failure to the ecosystem's stabilization. Third, it presents eight formal theoretical statements (P1 to P8) that provide an empirical basis for further quantitative testing and for redesigning public health policymaking (Vargo et al., 2015; Lusch & Nambisan, 2015).

2. Literature Review

2.1 Critique of Traditional Firm-Centric Service Recovery Models

In the traditional service recovery literature, the dominant theories have been Justice Theory (Tax et al., 1998; Oliver, 1980; Smith et al., 1999; Blodgett et al., 1997) and the Expectancy-Disconfirmation Paradigm (Oliver, 1980; Maxham & Netemeyer, 2002). After experiencing a service failure, customers' satisfaction is based on three structural dimensions and the judgments made on each facet: Distributive Justice - tangible outcomes and refunds or financial compensation; Procedural Justice - speed and efficiency of complaint handling and flexibility of procedures; Interactional Justice - empathy, politeness, and sincere apologies by service staff.

Although Justice Theory offers useful insights for competitive businesses like commercial firms (Gronroos, 2011; McColl-Kennedy et al., 2003), its basic principles do not apply to public healthcare ecosystems (Osborne et al., 2013; Radnor et al., 2014). First, public healthcare institutions operate without market incentives, with fixed budgets (whether statutory or agreed) and strict civil service rules that ban frontline staff from awarding financial compensation, discounts, and discretionary vouchers (Alford, 2002; Pestoff, 2006). Second, a Justice Theory perspective views recovery as a top-down, firm-based intervention that contains all the resources for recovery (Tax et al., 1998; Smith et al., 1999). In the public health arena, this resource problem is often a challenge in

public institutions, and it is non-firm actors – most notably family carers – who provide recovery resources (Skålén et al., 2015; Batalden et al., 2016).

Third, commercial recovery frameworks assume customers have market alternatives and, to motivate recovery efforts, include the threat of customer exit. Vulnerable citizens within a public healthcare system have no other healthcare options because it is not a choice but a social entitlement (Hastings, 2010; Pestoff, 2006). Because citizens cannot go elsewhere if the public sector fails, they must stay in a failing system and find informal ways to survive (Skálén et al., 2015; Brandsen & Honingh, 2016).

Fourth, traditional SFR literature views a complaint behavior as a necessary step in organizational recovery (Tax et al., 1998; Maxham & Netemeyer, 2002). In public agencies, however, where the culture is excessively cynical and complaining is heavily suppressed, these formal complaint systems will become 'complaint sinks' that neutralize citizens' feedback (Alford, 2002). Citizens who file complaints through an agency see no change and stop filing complaint documents (Pestoff, 2006). Citizens do not contact official complaints cells; instead, they negotiate with frontline clinicians, nurses, and others for informal recovery 'workarounds' (Batalden et al., 2016).

2.2 Service-Dominant Logic and the Shift to Multi-Actor Resource Reconfiguration

Service-Dominant Logic (SDL) fundamentally redefines service as the application of specialized competences (operant resources; knowledge, skills, and socio-emotional labor) for the benefit of another entity, through deeds, processes, and performances (Vargo & Lusch, 2004, 2008, 2016). While Goods-Dominant Logic emphasizes the product a firm creates and sells, arguments by Lusch and Vargo (2014), Akaka et al. (2012), and Chandler and Vargo (2011) shift the focus to collaboration and joint value co-creation in multi-layered service ecosystems.

SDL offers a compelling way to re-conceptualize service recovery in the context of service breakdowns (McColl-Kennedy et al., 2012; Jarvi et al., 2018). However, rather than seeing recovery as a "firm-centered" recovery of a broken transaction, SDL sees recovery as a dynamic process of reconfiguring resources and processes (Vargo & Lusch, 2016; Koskela-Huotari et al., 2016). After initial resource integration fails (the value is co-destroyed; Plé & Chumpitaz Cáceres, 2010), actors must engage in new resource integration efforts to revitalize a service (Batalden et al., 2016; Svehn et al., 2018).

Importantly, resource reconfiguration demands an understanding of how to navigate through institutional arrangements the embedded rules, norms and practices that structure the integration of resources at the micro, meso and macro levels (Chandler & Vargo, 2011; Beirão et al., 2017; Edvardsson et al., 2011). In public healthcare, the rules established in formal institutions are sometimes firm and inflexible, for example, very strict registration requirements or the rules of pharmaceutical distribution (Nishtar, 2010). Therefore, institutional work by actors—informally breaking, bending, or even creating new applications of resources is crucial for successful service recovery and co-creating health value (Koskela-Huotari et al., 2016; Vargo et al., 2015).

Actors do not act in a vacuum; they must rely on and use social capital, interpersonal trust, and moral empathy in this reconfiguration of resources (Chowdhury et al., 2016; Prior & Marcos-Cuevas, 2016). Formal administrative systems may fail to account for the clinical inputs and frontline service providers who can empathize with patients and families and create informal service bridges (Batalden et al., 2016) that tension family dynamics and help members adapt to the new environment. This multi-actor collaboration reframes the U-turn in service provision not as an event controlled solely by the service provider, but as a negotiated phenomenon within a network of actors (McColl-Kennedy et al., 2012).

2.3 Mid-Range Theory Development in Public Service Research

According to Merton (1968) and Brodie et al. (2011), mid-range theory development provides a needed link between macro- or high-level theory

(e.g., the foundational assumptions of SDL) and empirical observation. Although SDL may offer general ideas about how service ecosystems and resources should be integrated (Vargo & Lusch, 2016), it does not detail the granular operational processes of how recovery works in particular sectors such as public healthcare (Osborne et al., 2013).

To generate a mid-range theory grounded in participants' perspectives, the public healthcare sector study must identify specific relationships among constructs, process stages, and context-bound theoretical propositions (Charmaz, 2014; Eisenhardt, 1989). Based on empirical data from public healthcare encounters within the Global South, this study codes up a mid-range theory that specifies how actors under conditions of limited resources mobilize with informal capital, negotiate between administrative limits and co-restore value within the ecosystem of public healthcare (Batalden et al., 2016; Skålén et al., 2015; Svehn et al., 2018).

3. Research Methodology

3.1 Constructivist Grounded Theory Strategy

This study adopts a Constructivist Grounded Theory (CGT) methodology (Charmaz, 2006, 2014) to build a mid-range theory of public healthcare service recovery. CGT uses a constructivist epistemology, meaning theory construction is an interaction between the researcher and those involved in the research within a specific socio-institutional setting (Guba & Lincoln, 1994; Corbin & Strauss, 2008). Because CGT allows for the development of 'diagnoses according to a consistent code of practice ', enabling a systematic method to move from a rich extract from the empirical examples acquired along the study trajectory to abstract categories of theory, it is particularly suitable for mid-range theory building (Charmaz, 2014; Bryant & Charmaz, 2007).

3.2 Empirical Context and Fieldwork Execution

Empirical fieldwork was conducted in primary and secondary public healthcare facilities in District Mansehra, Khyber Pakhtunkhwa Province, Pakistan (Government of Khyber Pakhtunkhwa Health Department, 2021). District Mansehra has a diverse public health system, which includes:

1. District Headquarters Hospital (DHQ) Mansehra: Secondary 300-bed hospital with a high load of high-density outpatient departments, inpatient departments, Emergency departments, and surgical departments.
2. Rural Health Centers (RHCs): Primary gateway health providers offering basic emergency stabilization, maternal health, and routine outpatient care in Shinkiari, Khaki, and Baffa.

3.3 Theoretical Sampling and Multi-Actor Data Collection

The study followed iterative theoretical sampling (Charmaz, 2014; Glaser & Strauss, 1967) in data collection. The initial sampling included doctors and patients, as well as informal family caregivers, hospital pharmacists, record clerks, digital health operators, hospital administrators, and public complaint officers (Eisenhardt, 1989; Patton, 2015).

We conducted 28 theoretical sampling in-depth, semi-structured interviews. Multi-actor sampling allowed us to capture recovery interactions from various perspectives across the service ecosystem. Interviews were conducted in Urdu and Pashto and ranged from 45 to 90 minutes each; we then transcribed them verbatim and translated them from Urdu/Pashto to English. Table 1 reports overall participant profiles across all actor levels.

Table 1: *Participant Demographics, Research Setting, and Ecosystem Roles (N=28).*

Participant Code	Actor Category	Facility / Location	Gender	Professional Experience / Health Status	Role in Service Ecosystem
P01	Patient	DHQ Hospital Mansehra	Male	Chronic Outpatient (Hypertension)	Navigating OPD, pharmacy, and diagnostic test queues
P02	Patient	DHQ Hospital Mansehra	Female	Maternal Care / Inpatient	Receiving maternal services and Sehat Card verification
P03	Caregiver	DHQ Hospital Mansehra	Male	Accompanying Elderly Parent	Managing patient records, medicine procurement, and logistics
P04	Patient	RHC Shinkiari	Male	Emergency Trauma Patient	Seeking primary emergency stabilization and transfer
P05	Caregiver	RHC Khaki	Female	Accompanying Pediatric Patient	Navigating primary health consultations and medicine availability
P06	Patient	RHC Baffa	Male	General Outpatient	Seeking routine diagnostic testing and general checkup
P07	Patient	DHQ Hospital Mansehra	Female	Surgical Inpatient	Undergoing elective surgery via public insurance scheme
P08	Caregiver	DHQ Hospital Mansehra	Male	Accompanying ICU Patient	Managing emergency medicine procurement outside the hospital
P09	Medical Doctor	DHQ Hospital Mansehra	Male	12 years' experience (Senior MO)	Managing high OPD volume and clinical diagnosis

Participant Code	Actor Category	Facility / Location	Gender	Professional Experience / Health Status	Role in Service Ecosystem
P10	Medical Doctor	RHC Shinkiari	Female	7 Years' Experience (WMO)	Providing primary maternal and emergency medical care
P11	Medical Doctor	RHC Khaki	Male	5 years of experience (Medical Officer)	Conducting primary outpatient clinics and triage
P12	Staff Nurse	DHQ Hospital Mansehra	Female	9 years of experience (Charge Nurse)	Managing ward nursing, medicine administration, and patient care
P13	Staff Nurse	DHQ Hospital Mansehra	Female	11 years of experience (Senior Nurse)	Overseeing emergency ward logistics and bed allocation
P14	Hospital Pharmacist	DHQ Hospital Mansehra	Male	8 years of experience (Head Pharmacist)	Managing public medicine stock, inventory, and dispensing
P15	Hospital Pharmacist	RHC Baffa	Male	4 Years' Experience (Store Incharge)	Dispensing essential public medicines and tracking shortages
P16	Record Clerk	DHQ Hospital Mansehra	Male	15 Years' Experience (MRD Clerk)	Managing manual paper registration books and patient files
P17	Record Clerk	RHC Shinkiari	Male	6 Years of Experience (OPD Registration)	Issuing manual OPD slips and managing daily patient flow
P18	Digital Health Staff	DHQ Hospital Mansehra	Male	3 Years' Experience (Sehat Card Desk)	Verifying digital insurance eligibility and biometric records
P19	Digital Health Staff	RHC Khaki	Female	2 Years' Experience (Data Entry Operator)	Entering patient data into the provincial health management system

Participant Code	Actor Category	Facility / Location	Gender	Professional Experience / Health Status	Role in Service Ecosystem
P20	Hospital Administrator	DHQ Hospital Mansehra	Male	18 Years' Experience (Deputy MS)	Overseeing clinical operations, staff allocation, and logistics
P21	Hospital Administrator	DHQ Hospital Mansehra	Male	22 Years' Experience (Medical Superintendent)	Managing facility budget, provincial ministry reporting
P22	Complaint Officer	DHQ Hospital Mansehra	Male	6 years of experience (In-charge, Complaint Cell)	Receiving and processing public grievances and complaints
P23	Patient	DHQ Hospital Mansehra	Male	Orthopedic Outpatient	Navigating X-ray diagnostics and specialist consultation
P24	Caregiver	RHC Baffa	Male	Accompanying Elderly Mother	Arranging emergency transport and acquiring prescribed drugs
P25	Medical Doctor	DHQ Hospital Mansehra	Male	14 years' experience (Consultant Specialist)	Managing specialized clinical interventions and referrals
P26	Staff Nurse	RHC Shinkiari	Female	6 years of experience (Community Nurse)	Assisting in maternal health and emergency triage
P27	Hospital Pharmacist	DHQ Hospital Mansehra	Male	5 Years' Experience (Assistant Pharmacist)	Handling pharmacy counter dispensing and inventory verification

4. Data Analysis

The data analysis used only Charmaz's (2006, 2014) constructivist qualitative coding framework, based on line-by-line coding, initial coding, focused coding, and theoretical integration.

This first round of line-by-line coding identified 310 gerund codes related to recovery actions and adaptive negotiations (e.g., 'bypassing broken or unworkable digital portals', 'procuring emergency medicines from outside the system', 'mobilizing

family social capital', 'informal negotiations regarding nurse triage').

2. Focused Coding: Collapsed initial codes into 16 focused codes that represented unique ways of coping with illnesses (referred to as 'recovery behaviors') or special consideration for rules (informal 'workarounds').

3. Theoretical / Axial Integration: Seven main axial codes were synthesized from the focused codes and served as the main categories of the structural organization of the mid-range theory. Table 2 shows the result of the coding integration and constitutes the axial coding framework.

Table 2: *Axial Categories and Theoretical Integration Framework for Service Recovery.*

Axial Category	Underlying Empirical Process	Key Ecosystem Actors	Role in Mid-Range Theory
1. Service Disruption Perception	Recognizing systemic breakdown in care delivery	Patients, Caregivers, Frontline Staff	Trigger state for recovery mobilization
2. Informal Triaging & Workaround	Bypassing formal bureaucratic gatekeepers	Caregivers, Nurses, Security Staff	Initiation of non-formal recovery pathways
3. Heterogeneous Resource Substitution	Replacing missing public assets with private resources	Caregivers, Commercial Vendors, Pharmacists	Core mechanism of operant resource integration
4. Inter-Actor Negotiation	Re-bargaining care delivery terms across boundaries	Doctors, Clerks, Caregivers, Admins	Micro-level alignment of operant resources
5. Caregiver Navigation Labor	Expending physical and social effort to manage care	Family Caregivers, Relatives	Primary informal engine of ecosystem recovery
6. Rule-Bending Authority	Exercising discretionary administrative override	Senior Doctors, Hospital Administrators	Meso-level institutional rule modification
7. Value Co-Restoration	Achieving functional care stabilization and well-being	Patients, Caregivers, Healthcare Network	Final theoretical outcome state

5. Empirical Results & Mid-Range Theory Formulation

The empirical analysis shows that service recovery in public healthcare is an 8-stage resource realignment process, where negotiations about interactions among different actors take place in multi-actor networks. There are sequential steps which are illustrated as follows:

Stage 1: Breakdown of occurrence — Systemic failure disrupts initial care delivery, such as a pharmaceutical stock-out, a missing file, or a digital outage (P01, P14, P18). As P14 (Pharmacist) said: 'When the stock runs out, the functioning of the care process just comes to a halt all of a sudden.

Stage 2: Disruption Recognition — Patients and caregivers recognize value co-destruction and care stoppage (P03, P07). P03 (Caregiver): 'I realized, standing at the official counter, I was going nowhere with my dad getting worse.

Stage 3: Informal Triage — Caregivers avoid going through formal complaint cells and go to empathetic frontline staff (nurses, junior doctors) (P04, P12). P12 (Charge Nurse) commented: 'Caregivers go straight to the nurse when they need care – they do not even go to the front desks'.

Stage 4: Resource Mapping — actors map where resources are available both in and outside the hospital to consider alternative operant and operam resources (P08, P15). P08 (Caregiver):

'The nurse told me to go to a private pharmacy right across the street where he had a certain injection."

Stage 5: Inter-Actor Negotiation — Caregivers, doctors, and clerks in charge of the process come up with informal solutions (e.g., forming external prescriptions, writing manual slips) (P09, P16). P09 (Senior MO) stated: 'I write the prescription on a simple piece of paper sheet so that the family can purchase from outside the hospital' de rigueur as regards stock.

Stage 6: Resource Substitution: External private provision of resources (commercial medicines, private diagnostic labs, private transport) is introduced to the process of hospital care (P03, P24). P24 (Caregiver) reported: 'We ordered a private ambulance to take my mother home, and bought the drugs,' to keep her alive.

Stage 7: Functional Care Stabilization - Clinical treatment resumes with substituted resources; the patient's health is clinically stabilized (P02, P25). P25 (Specialist) added: 'We can conduct the operation right away – once the family brings the necessary materials from outside.

Stage 8: Value Co-Restoration. Infilmed trust between actors is potentially re-established, and health and well-being are restored (P05, P21). We asked P05 (Caregiver): 'Did the doctor save your child by using the medicines that you purchased outside? Whether or not the hospital had any stock, I am grateful to the doctor.

To formalize the mid-range theory, Table 3 presents the Heterogeneous Resource Realignment Matrix, which maps the substitution of key resource types in public healthcare service recovery.

Table 3: *Heterogeneous Resource Realignment Matrix in Public Healthcare Service Recovery.*

Resource Dimension	Failed State (Co-Destruction)	Substituted / Reconfigured State	Key Integrating Actor
Clinical Knowledge	Absent specialist doctor / diagnostic gap	Nurse informal triage / cross-departmental consult	Charge Nurses, Senior MOs
Administrative Authority	Rigid clerk gatekeeping / file misplacement	Discretionary administrative override / manual slip	Deputy MS, Senior Doctors
Pharmaceutical Operations	Public pharmacy stock-out of critical drugs	Caregiver private pharmacy procurement outside	Family Caregivers, Commercial Vendors
Information & Data	Digital insurance portal server crash	Manual paper register bypass & retroactive entry	Digital Desk Operators, Record Clerks
Transportation & Logistics	Uncoordinated referral / absent ambulance	Private hired vehicle transport & caregiver escort	Caregivers, Private Drivers
Relational Trust	Grievance suppression / institutional cynicism	Direct interpersonal empathy & informal rapport	Patients, Caregivers, Frontline Staff

5.1 Grounded Theoretical Propositions (P1 to P8)

Based on the 8-stage model and resource matrix, eight formal theoretical propositions, which characterize the Negotiated Reconfiguration Theory of Public Healthcare SFR, are formulated:

P1: Recovery of services occurs mainly in non-firm ways in resource-constrained public health care contexts, through multi-actor resource reconfiguration, but not through the formal composition of the health care organization. Traditional experience shows that public health institutions lack institutional mechanisms to address the need for compensation. Recovery happens when non-firms reconfigure available resources across the network's boundaries.

The presence, active participation, and engagement of informal family caregivers positively moderate the speed and success of service recovery in public health facilities (Batalden et al., 2016; Svehn et al., 2018). Family carers provide the necessary operant labor (locating and moving around hospital wards) and operant funds (bribes to get drugs from outside the hospital) and, above all, act as the informal engine of recovery.

Perceived patient vulnerability (Edvardsson et al., 2011; Koskela-Huotari et al., 2016) and interpersonal caregiver empathy directly contribute to frontline healthcare workers' willingness to engage in administrative rule bending, or discretionary override (P3). At the level of stark patient discomfort, doctors and nurses conduct their own kind of micro-level institutional work by issuing manual slips or informal consults, allowing them to circumvent overbureaucratised institutional procedures.

Proposition 4 (P4): Heterogeneous resource substitution, particularly the insertion of private operational resources in the delivery of public services, is an essential precondition for achieving value co-restoration in cases of stock-outs in public pharmaceuticals (Hastings, 2010; Plé & Chumpitaz Cáceres, 2010). Solutions to restore care involve substituting, as far as possible, private commercial drugs in the hospital treatment encounter.

It is proposed that when formal grievance processes (complaint absorption) fail in service delivery, citizens resort to informal social capital and interpersonal negotiation to recover a service (P5) (Tax et al., 1998; Maxham & Netemeyer, 2002). As performative complaint sinks, physical complaint boxes offer patients and caregivers an alternative way to negotiate with front-line staff without always using the forms and pathways.

Proposition 6 (P6): Technological infrastructure failures (digital eligibility crashes) increase dependence on informal human ‘workarounds' and manual paper ‘bypasses' that prevent a total stoppage of care (Lusch & Nambisan, 2015; Akaka et al., 2012). Human operant flexibility (paper manual registers) brings back access to care when digital platforms are down.

Proposition 7 (P7): Informal communication between medical professionals (outside institutional procedures) plays a positive role in the success of an inter-facility referral (Beirão et al., 2017; Chandler & Vargo, 2011). Doctors at primary centers can replace bed-space reservations with a direct phone call to doctors at secondary hospitals.

Proposition 8 (P8): While institutional cynicism continues toward the public health system, co-restoration restores clinical well-being and interpersonal trust between patients and frontline workers. They are grateful to empathetic clinicians who could make workarounds but show a high level of distrust in the public health system as a whole.

Propositional Mechanics, Detailed Analysis of:

Even if the family caregiver's contributions are not used from outside the family system under either P1 or P2, the family caregiver's contribution is seen as an invaluable operant resource within the system. As P03 (Caregiver) explained: 'The zero care would have been the condition my father would have been in if I was not constantly coming and going from the emergency room, the private chemist and the laboratory. This indicates that families are now the recipients of recovery labor from public institutions (Batalden et al., 2016).

P3 and P4 place responsibility on frontline clinicians to balance what is "required" and what is "required" in a legal and moral sense, respectively (Edvardsson et al., 2011). The Department of Health agreed that P09 (Senior MO) breached official hospital policy by strictly handing out prescriptions only to private pharmacies. However, when no cardiac medicine is available in our store, to serve our policy would mean letting the patient die. We value human life above any policy. This amounts to bending the rules on a micro-level, an institutional one (Koskela-Huotari et al., 2016).

Digital system outages demonstrate the superior capabilities of human operant intelligence compared to static program code (Lusch & Nambisan, 2015), as in P5 and P6. When the central portal is down, we write down the patient's ID on paper, let them go through surgery, and update the digital portal days later when it comes back online. – P18 (Digital Health Desk) This is a factor that gets rid of surgical delays and prevents them from turning into catastrophes with the help of humans.

The perspective in P7 and P8 is that interpersonal trust is an important lubricating boundary of relationships that replaces the decay of formal and/or institutional structures. As P25 (Specialist) noted: 'I call on my personal cell phone and, as a favor to me, a colleague at the tertiary hospital calls them, and they find a bed for my patient. Lost formal referral forms and personal relationships saved lives. This highlights the role of micro-level social capital in macro-level health ecosystem resilience (Beirão et al., 2017; Vargo et al., 2015).

In addition, the theoretical analysis of P1, P2, P3, P4, P5, P6, P7, and P8 helps pinpoint how the ecological system can restore equilibrium through resource substitution. Public health institutions (health, education, WASH) cannot directly supply key operational assets (medicines, diagnostics, beds), and informal actors fill these gaps. Private family care financing and care workers constitute an effective and important way of co-sponsoring service recovery (Batalden et al., 2016; Hastings, 2010). In the public world, this multi-actor synergy shows that service recovery is not a single-firm response but a network-wide emergent mechanism (Skålén et al., 2015; Osborne et al., 2013).

Further, the propositions indicate that value co-restoration is not only about customer satisfaction. Recovery in the business environment is about winning customers back and building brand equity (Tax et al., 1998). Value co-restoration begins in public healthcare even when structural dissatisfaction with state infrastructure remains. This leads to functional health stabilization (saving lives and alleviating "acute suffering") without addressing structural dissatisfaction with state infrastructure (Osborne et al., 2013; Beirão et al., 2017). This is a subtle - and important - distinction between the frontline relational appreciation and the systemic institutional cynicism, and is one of the theory's important contributions.

Finally, recovery is a continuous, adaptive process in PSEs, not a point-in-time event following a complaint (Vargo & Lusch, 2016; Brodie et al., 2011). Formally, actors provide recovery networks to cope with resource scarcity, but these networks are active and sustainable every day in case of breakdowns in the formal system (Koskela-Huotari et al., 2016). Service recovery becomes part of the normal day-to-day process of delivering public healthcare services (Skålén et al., 2015).

This continuous adaptation is operational and exemplifies human actors' strength in hostile institutional environments. Formal organizational structures show inertia; on the other hand, humans as actors have the choice of how to act – they have moral choices and creative decisions concerning how they integrate their different resources to survive (Koskela-Huotari et al., 2016). In this process, they show that public service ecosystems can be supported – not only through state budgets or statutory regulations – but through the relationship and negotiated arrangements between everyday people and committed public servants (Batalden et al., 2016; Beirão et al., 2017).

Overall, the eight 'propositions' collectively offer a unified theoretical framework that can address the multi-actor, multi-level dimension of public healthcare service recovery. The model provides a

solid mid-range, semi-empirical theory that future empirical studies can test by connecting micro-level caregiver work to macro-level institutional scarcity and meso-level administrator choices (Merton, 1968; Brodie et al., 2011; Vargo et al., 2015).

Table 4: *Summary Framework of Grounded Theoretical Propositions (P1 to P8).*

Proposition Code	Formal Theoretical Statement	Core Underlying Mechanism
P1	Public healthcare recovery is non-firm-driven and multi-actor centered.	Ecosystem resource reconfiguration replacing firm compensation.
P2	Caregiver active participation accelerates service recovery success.	Informal caregiver labor filling organizational operational gaps
P3	Frontline rule-bending is driven by vulnerability and empathy.	Micro-level institutional work overriding rigid administrative red tape
P4	Private resource substitution is essential during public stock-outs.	Integrating external commercial assets into public care encounters
P5	Formal complaint failure forces reliance on informal social capital.	Bypassing performative complaint cells via direct interpersonal bargaining
P6	DigIT outages increase reliance on manual human bypasses.	Human operant flexibility mitigates rigid technological failures.
P7	ReReferral recovery relies on informal professional networks.	Direct doctor-to-doctor communication bridges institutional voids
P8	Value co-restoration repairs interpersonal trust despite institutional cynicism.	Separating frontline relational empathy from systemic institutional distrust

6. Discussion

The Negotiated Reconfiguration Theory of Public Healthcare SFR represents a major paradigm shift in service recovery research (Tax et al., 1998; Smith et al., 1999; Vargo & Lusch, 2016). The findings in this study reveal that satisfaction with and evaluation of service recovery in public ecosystems is a multi-actor, collaborative effort that requires realigning resources and, thereby, restoring value, rather than firm-centric recovery efforts that rely on the commercial assumptions of traditional service recovery literature.

First, this mid-range theory adds to and clarifies Service-Dominant Logic by explaining how value is co-restored (Plé & Chumpitaz Cáceres, 2010; Echeverri & Skålén, 2011; Jarvi et al., 2018). Existing SDL scholarship has mostly focused on accounting for value loss in response to resource misintegration (Chowdhury et al., 2016; Prior & Marcos-Cuevas, 2016), but has neglected to explore recovery. This study depicts the process through which actors transitioned from co-destruction of value to value co-creation in eight stages, showing that recovery is an ongoing adaptive negotiation rather than a singular act by the firm (Batalden et al., 2016; Svehn et al., 2018).

Second, the results raise informal family caregivers – in particular – to a higher theoretical level in service management (Batalden et al., 2016; Osborne et al., 2013). In mainstream service management literature, a customer is a person receiving acts of recovery from the firm (Tax et al., 1998; McColl-Kennedy et al., 2003). Family members are a vital key to integrating resources and co-creating family recovery in a public healthcare system. Human resources such as caregivers skillfully deliver operant resources (persistence, social capital, and patient navigation)

and operam resources (out-of-pocket financial resources for external drugs and transportation) to avert service failure and patient death (Hastings, 2010; Skálén et al., 2015).

Third, this study on service recovery (Koskela-Huotari et al., 2016; Edvardsson et al., 2011) extends institutional theory in the service field by emphasizing institutional work and rule bending. In public healthcare, these institutions tend to be stiffly structured, with little flexibility (Nishtar, 2010). Frontline care providers involved in discretionary rule bending—such as giving manual paper slips when a server goes down and facilitating informal referrals—do micro-level institutional work to adjust administrative rules for delivering care (Vargo et al., 2015; Beirão et al., 2017).

Fourth, this mid-range theory contributes to public administration research by offering a fresh conceptual lens for examining public service management (Osborne et al., 2013; Radnor et al., 2014). Models of traditional public administration take a compliance perspective on service delivery and/or the efficiency perspective of New Public Management (Alford, 2002; Pestoff, 2006). This study highlights the need to design public institutions to be flexible and human-centered in how they integrate resources, since a public service's viability depends on multi-actor resource reconfiguration that occurs outside institutions and formal rules (Brandsen & Honingh, 2016; Skálén et al., 2015).

Fifth, theory connects different levels of service interactions (micro-level) and policy frameworks (macro-level) (Chandler & Vargo, 2011; Beirão et al., 2017). The model offers public health planners a blueprint based on successful caregiver negotiations at the micro level, macro-level budget gaps, and meso-level administrative constraints, as micro-level negotiations fill the resulting gaps.

Sixth, informal social networks play an important role in keeping public-sector services operational (Chowdhury et al., 2016). In the absence of working formal protection systems, social capital can serve as a substitute informal safety net. Nevertheless, informal social capital also raises equity issues because the speed of service recovery varies with patients' informal social capital ties (Pestoff, 2006; Hastings, 2010) and financial reserves. Therefore, it is important to formalize these recovery pathways and provide equitable service restoration to all citizens.

Seventh, the study offers valuable comparative perspectives for health service research in developing economies of the "global South" (World Bank, 2019; Kurji et al., 2016). Healthcare ecosystems in developed countries rely on automated digital redundancies and rigid institutional enforcement (Batalden et al., 2016), while in other countries' health systems, human adaptability is key to coping with limited infrastructure (Nishtar, 2010). These realities in the Global South are reflected in the Negotiated Reconfiguration Theory, which provides an applicable framework for public health systems in South Asia, Sub-Saharan Africa, and Latin America (World Health Organization, 2018).

7. Strategic Policy & System Recommendations

To translate the Negotiated Reconfiguration Theory into actionable public health policy, healthcare administrators and provincial health planners must implement ten structural policy initiatives:

1. Institutionalization of Caregiver Co-Recovery Roles: Formally incorporate family caregivers into hospital care protocols by issuing caregiver navigation passes and providing structured care coordination guidelines (P03, P08).
2. Discretionary Recovery Budget Allocations: Authorize hospital medical superintendents and emergency department heads to utilize discretionary emergency funds for immediate patient recovery needs during pharmaceutical stock-outs (P14, P21).
3. Rapid Manual Bypass Protocols for Digital Outages: Establish clear, standardized paper-based administrative bypass procedures that automatically activate when digital insurance portals undergo server outages exceeding 15 minutes (P18, P28).

4. Formalization of Frontline Administrative Discretion: Enact administrative policy guidelines that legally protect frontline doctors and nurses when exercising discretionary rule-bending to save patient lives during emergency admissions (P09, P12).
5. Creation of Dedicated Inter-Facility Referral Desks: Establish dedicated, phone-and-WhatsApp-connected referral desks at secondary and primary facilities to verify bed availability before patient dispatch (P10, P25).
6. Re-engineering Public Complaint Cells into Patient Advocacy Units: Transform passive complaint boxes into active, nurse-staffed Patient Advocacy Units authorized to resolve service friction in real-time on hospital floors (P22, P23).
7. Transparent On-Site Pharmaceutical Inventory Displays: Install digital or whiteboard public inventory displays at hospital pharmacies listing daily available medicines to eliminate information asymmetry and build trust (P14, P15).
8. Multi-Actor Service Recovery Training Programs: Implement joint training modules for clinical, administrative, security, and digital staff focused on empathetic communication, collaborative problem-solving, and service recovery negotiation (Vargo et al., 2015).
9. Rural Facility Resource Redundancy Backups: Upgrade Rural Health Centers with solar power micro-grids and satellite communication links to ensure uninterrupted digital verification and emergency triage in remote regions (P19, P26).
10. Public Healthcare Service Recovery Accountability Framework: Formulate a provincial Service Recovery Framework that mandates public health facilities to track, audit, and report monthly service failure recovery rates to provincial health authorities (Osborne et al., 2013).

8. Conclusion

This study proposes the Negotiated Reconfiguration Theory of Public Healthcare Service Recovery as a transformative mid-range theory grounded in Service-Dominant Logic and Constructivist Grounded Theory. The paper argues that, beyond commercial and firm-centered recovery, public healthcare is a highly negotiated, multi-actor process of resource reconfiguration and recovered value co-creation.

The research highlights the importance of informal family care provision, front-line administrative rule-bending, and heterogeneous resource substitution in stabilizing failing health encounters through the 8-Stage Resource Realignment Process model and eight theory-grounded propositions (P1 to P8). Leading and inspiring public healthcare systems to develop this policy will help transition from performative complaint handling to more resilient, adaptive, service-interdependent systems in public healthcare, securing citizens' welfare.

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